

INTERNATIONAL® DT 466

versus Caterpillar® C7



International® DT 466



Caterpillar® C7

-Powers Thomas Built and Bluebird Buses

The International DT 466 is consistently one of the leading diesel engines for class 5-7 medium trucks and school buses with over 1 million produced. For over 25 years continuous improvement has kept it at the top.

The International DT 466 is the only high volume mid-range diesel engine with replaceable wet sleeve architecture. Wet sleeves are the defining features of premium big bore diesels.

The extra life cycle value the International DT 466 can deliver compared to the Caterpillar 3126E/C7 is significant. Details are on the following pages.

International® DT 466 Bus Value Advantages

- Wet-sleeve design
- Durability
- In Chassis Rebuild
- Responsive acceleration-Engine Intuitive Shift

INTERNATIONAL[®]

DT 466 Maintainability

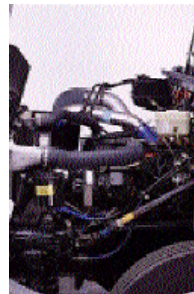
versus Caterpillar[®] C7

Preventive maintenance cost (based on first 100,000 miles [160,934km])



International[®] 4000 Series

Normal maintenance is approx. \$740 for the first 100,000 miles with DT 466.



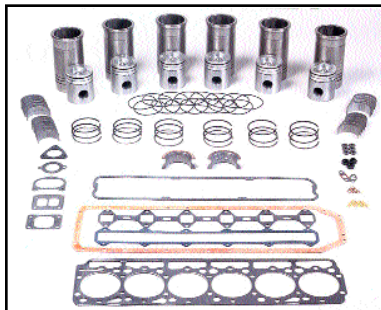
Caterpillar[®]

Normal maintenance varies from approximately \$1,244 for the standard 22qt. capacity pan, to \$1,142 for the 30qt. engine.

Value

International has eliminated, extended and synchronized service intervals to reduce labor and parts cost on major preventive maintenance items. Preventive maintenance is between \$402 and \$504 less than the competitive chassis powered by the Caterpillar 3126E.

Overhaul Cost



International[®] DT 466

Premium high value wet sleeve engines are designed to be overhauled "in-frame" by replacing wear components with an International[®] Works Kit[™]. The "Works Kit" is priced at \$1,300 plus \$1,720* labor to install at \$80/hour labor. Add \$1,300 for a cylinder head rebuild and you've got an "as new" engine without ever removing it from the chassis. Total cost \$4,320.



Caterpillar[®] C7

Lower value parent bore engines are not designed for in-frame overhaul. The most economical way to address a worn parent bore engine is with a remanufactured unit. Caterpillar reman units are available and generally priced at \$6,000 (including core value) plus \$1,750* labor to install. Total cost is approximately \$7,750.

Value

International[®] DT 466 engine overhaul cost is \$3,430 less than typical parent bore engines like the Caterpillar 3126E.

* based on \$80/hour labor rate & 21.5 hrs. for Truck in-frame

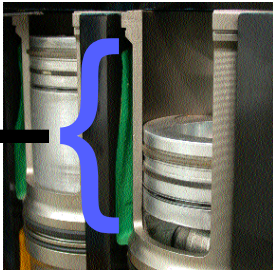
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DT 466 Resale Value

versus Caterpillar® C7

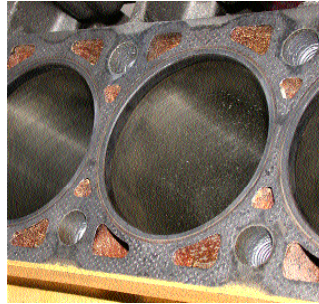
Premium Wet Sleeve Construction

**International® DT 466
(wet Sleeve)**

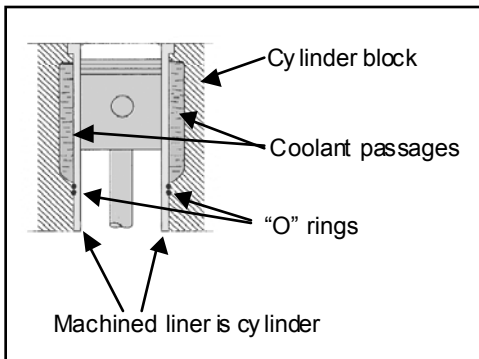


Premium high value precision machined with uniform cylinder wall thickness and fully induction hardened.

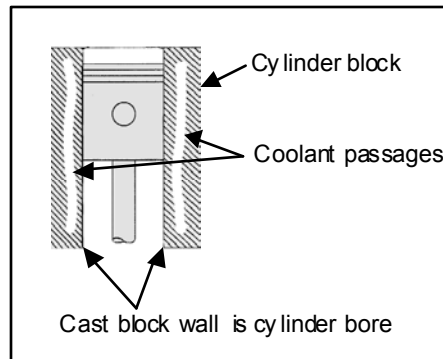
**Caterpillar® C7
(parent bore)**



Lower value cast bore in block design. Inconsistent wall thickness.



Premium high value machined wet sleeves provide consistent cylinder wall thickness for uniform heat transfer to coolant and minimal cylinder thermal stress. Cylinder is completely surrounded with coolant - no hot spots due to variable thickness cylinder walls. Result is longer power cylinder life.



Lower value parent bore cylinder wall thickness is not as consistent as machined sleeve due to casting irregularities. Coolant does not completely surround the cylinder because of necessary internal cast webbing. Cylinder wall cooling is not as consistent. Hot spots expand and increase wear.

Value

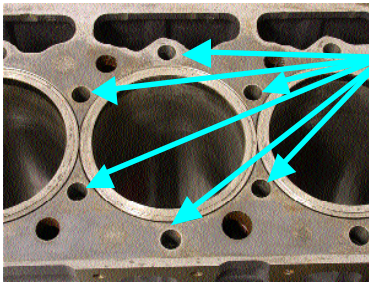
The International reputation, support network, and the premium features of the DT 466 like wet sleeve design contributes to the durability, reliability, and performance International buses are noted for. Buses with less reliable engine performance may result in jeopardizing those critical school schedules and unexpected costs.

INTERNATIONAL[®]

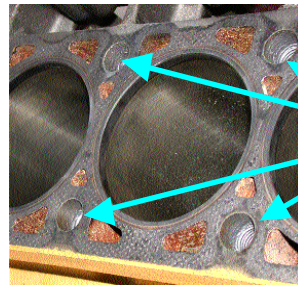
DT 466 Durability

versus Caterpillar[®] C7

Headbolts



6 bolts



4 bolts

International[®] DT 466

Premium high value head clamping with 6 bolts per cylinder provides even distribution of clamping force to assure head gasket integrity

Caterpillar[®] C7

Lower value, 4 bolts per cylinder

Value

The International reputation, support network, and the premium features of the DT 466 like 6 head bolts per cylinder and robust connecting rods contribute to the value International buses are noted for. Buses with less reliable engine performance may result in jeopardizing those critical school schedules and unexpected costs.

Engine Durability

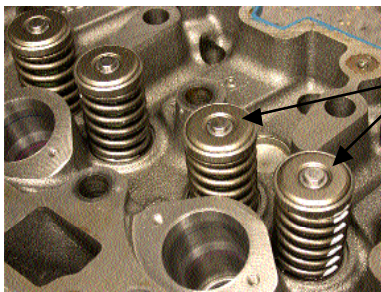
The DT 466 is a larger and heavier engine than the Caterpillar C7. Consequently, the C7 operates under greater stress with higher horsepower per liter of displacement. Compare the connecting rods in the photo at right for an example of the DT 466 robust construction.



INTERNATIONAL[®] DT 466 Resale Value

versus Caterpillar[®] C7

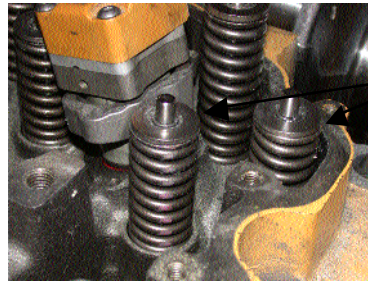
Valve rotators



Rotators

International[®] DT 466

Premium high value positive valve rotators are used on intake and exhaust valves. Each time a valve closes, the valve rotator turns the valve slightly. Rotation improves the efficiency of heat transfer, and minimizes seat wear thus extending the life of the valve face and the valve seat.



No rotators

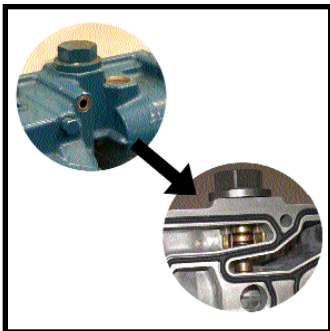
Caterpillar[®] C7

Lower value valve approach does not include rotators. Valve life is longer with rotators.

Value

The International reputation, support network, and the premium features of the DT 466 like valve rotators and an oil cooler thermostat contribute to the value. International Buses are noted for.* Buses with less reliable engine performance may result in jeopardizing those critical school schedules and unexpected costs.

Oil cooler thermostat



International[®] DT 466

Premium high value thermostat channels oil past the oil cooler until it reaches operating temperature. This assists faster oil warm up and better flow of lubricant.



Caterpillar[®] C7

Caterpillar uses a low value approach in which oil is circulated through the cooler even on cold starts.

*Source: NADA

INTERNATIONAL® DT 466 Reliability / Durability

versus Caterpillar® C7

Value

After looking at the photos and reading the description of premium International DT 466 features, we think you'll know why it could be expected to have a significantly longer B-life than parent bore engines like the Caterpillar C7



International® DT 466

B10 life for the DT 466 is 300,000 miles (90% of engines still running) with B50 life at 450,000 miles (50% of engines running) under normal operating conditions.



Caterpillar® C7

Caterpillar claims a B50 life between 300,000 and 500,000 miles. The C7 does not have the premium features inherent in the DT 466.

International® DT 466 Bus Value Advantages

- Wet-sleeve design
- Durability
- In Chassis Rebuild
- Responsive acceleration-Engine Intuitive Shift

INTERNATIONAL® DT 466 Performance

versus Caterpillar® C7



International DT 466

International® DT 466 - 7.6L – weight: 1480 lbs

<u>Rated/ Peak HP @ RPM</u>	<u>HP/Liter</u>	<u>Rated Peak Torque @ RPM</u>
210 HP @ 2300 RPM	25.6	520 lb-ft @ 1400 RPM
220 HP @ 2300 RPM	28.2	540 lb-ft @ 1400 RPM
225 HP @ 2300 RPM	28.2	560 lb-ft @ 1400 RPM
245 HP @ 2300 RPM	28.2	620 lb-ft @ 1400 RPM
245 HP @ 2300 RPM	30.2	660 lb-ft @ 1400 RPM
260 HP @ 2300 RPM	30.2	800 lb-ft @ 1400 RPM



Caterpillar C7

Caterpillar® C7 - 7.2L – weight: 1295 lbs

<u>Rated/ Peak HP @ RPM</u>	<u>HP/Liter</u>	<u>Rated Peak Torque @ RPM</u>
190 / 207 HP @ 2200 RPM	26. 3	520 lb-ft @ 1440 RPM
210 / 210 HP @ 2400 RPM	29.1	520 lb-ft @ 1440 RPM
210 / 210 HP @ 2200 RPM	29.1	605 lb-ft @ 1440 RPM
230 / 230 HP @ 2200 RPM	31.9	660 lb-ft @ 1440 RPM
250 / 250 HP @ 2200 RPM	34.7	660 lb-ft @ 1440 RPM
250 / 250 HP @ 2200 RPM	34.7	800 lb-ft @ 1440 RPM
275 / 275 HP @ 2200 RPM	38.1	860 lb-ft @ 1440 RPM
300 / 300 HP @ 2200 RPM	41.6	800 lb-ft @ 1440 RPM
300 / 300 HP @ 2200 RPM	41.6	860 lb-ft @ 1440 RPM
330 / 330 HP @ 2200 RPM	45.8	860 lb-ft @ 1440 RPM

* Fire truck and RV rating

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